

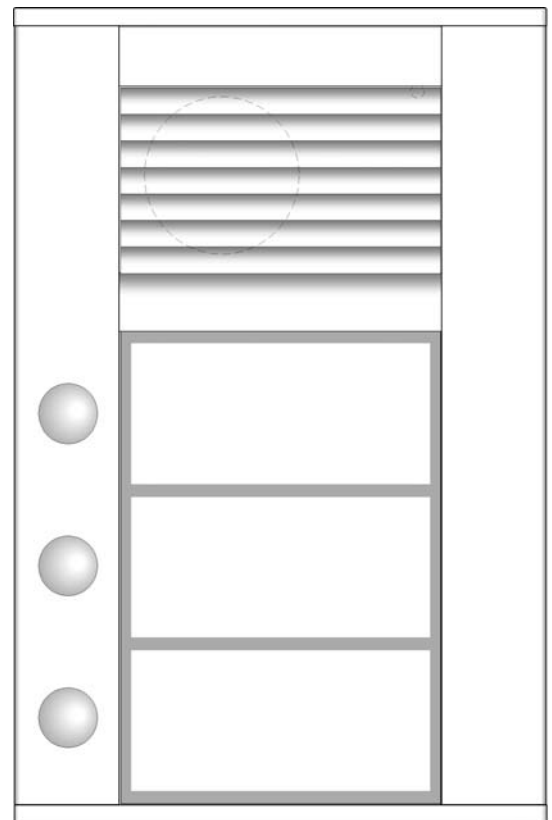
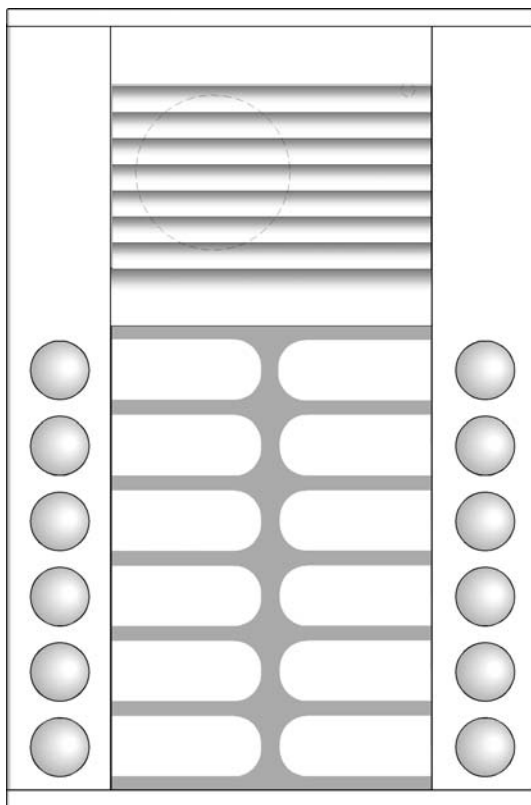


# Product information

Front-door station series  
for surface-mounting

Profi-Economic **PES**

Profi-Design **PDS**



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## Scope of delivery

- 1 x PES / PDS
- 1 x hexagonal angle screwdriver DIN 911
- 1 x screwdriver with round handle
  - nameplates, empty and with light symbol
  - product information

## Safety notices

**!** Assembly, installation, and commissioning must only be carried out by a qualified electrician!

For work on systems with 230 V AC mains current the safety requirements of DIN VDE 0100 must be observed.

When installing TCS:BUS systems the general safety rules for telecommunication systems in accordance with VDE 0800 must be observed:

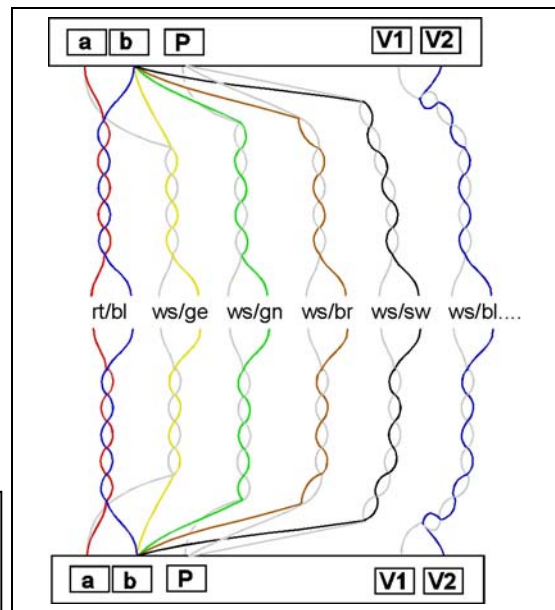
- separate cabling for high and low voltage lines,
- minimum distance of 10 cm for joint cabling arrangements,
- use of separators between high and low voltage lines in joint cable ducts,
- use of standard telecommunication cables, e. g. J-Y (St) Y with 0.8 mm<sup>2</sup> cross section,
- existing cables (rationalisation) with different cross sections may be used whilst taking account of the loop resistance.

**!** Suitable lightning protection must ensure that a voltage of 32 V DC will not be exceeded at the TCS:BUS wires a and b.

## General notes on the cabling in TCS audio systems

The cabling depends on the building situation and is only limited by its length.

- When selecting the cable length consider: the loop resistance must not exceed max. 20 Ω (table)
- To keep within the max. permissible loop resistance the wire cross section can be doubled, i.e. two lines are used for one wire (figure). The lines must be twisted.
- When using screened cables: connect the screens to each other and connect on one side to earth (b wire) on the power supply unit
- Choice of line or star wiring

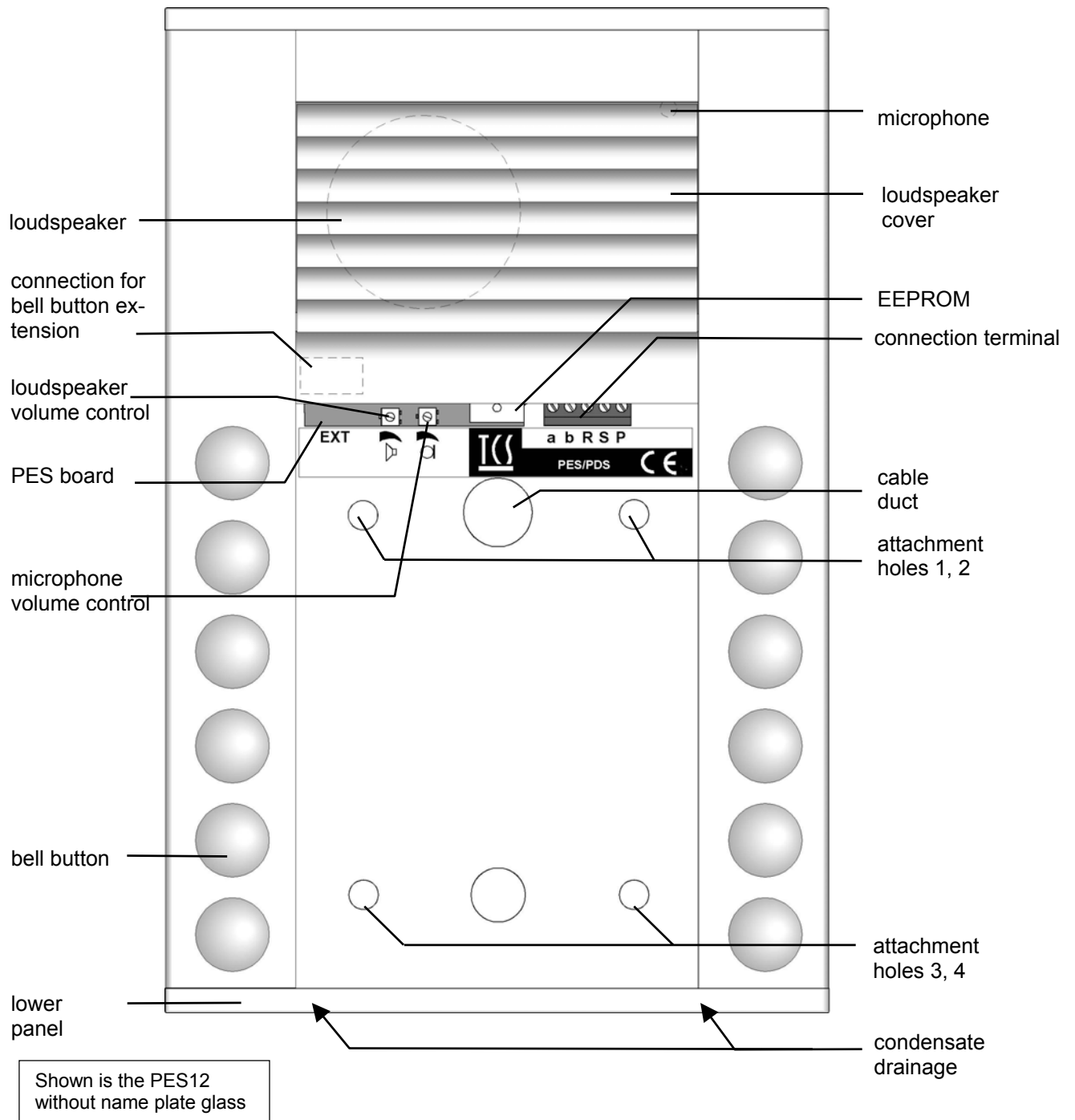


rt = red	gn = green
bl = blue	br = brown
ws = white	sw = black
ge = yellow	

Table: loop resistances

Cable length in m	Cable cross section	
	0.6 mm <sup>2</sup>	0.8 mm <sup>2</sup>
Loop resistance in Ω		
10	1.22	0.69
20	2.45	1.38
30	3.67	2.07
40	4.90	2.76
50	6.12	3.44
60	7.35	4.13
70	8.57	4.82
80	9.80	5.51
90	11.02	6.20
100	12.24	6.89
150	18.37	10.33
200	24.49	13.78
250		17.22
300		20.66

### Device overview



### Technical data

Supply voltage:	+ 24 V + 8 % (via power supply and control unit)
Case:	aluminium, anodised
Name plate glass:	plexiglass
Operating temperature range:	-20°C to 50°C
Input current:	I(a) = 0.4 mA, I(P) = 16 mA standby
Maximum input current:	I(Pmax) = 65 mA

## Application

The PES / PDS are front-door stations for exterior use. They are suitable for surface mounting.

## Brief description

### Basic functions

Bell buttons	<ul style="list-style-type: none"> <li>• Operating a programmed bell button triggers a ringing tone at the in-house station.</li> <li>• Operating an unprogrammed bell button triggers the light switch function in the power supply and control unit.</li> <li>• When operating a bell button an acknowledgement tone sounds.</li> </ul>
Saving the bell button allocations in the front-door station	All programmed data (serial numbers and parameters) are stored in the EEPROM. If the front-door station requires replacement, the EEPROM board can be removed from the programmed front-door station and inserted into the new front-door station of identical design.

### Additional functions

Name plate illumination	via LED, P-wire connection required.
connection	<ul style="list-style-type: none"> <li>• for Service Device</li> <li>• for PES / PDS: for connection of a bell button extension PET / PDS.</li> </ul>
Allocation of serial number to bell buttons	2
additional switching signal	use a combining device BRE2.

## Assembly

### 1. Opening the case

The lower panel is attached to the aluminium profile by two hexagon socket screws.

(1) Unscrew both screws using an Allen key only half way:

(2) Turn the lower panel to the left, without removing it completely.

(3) Slide the name plate glass fully down.

### 2. Feed the cables through the cable duct.

### 3. Attach the device safely to the wall from the attachment holes (see overview) using suitable screws.

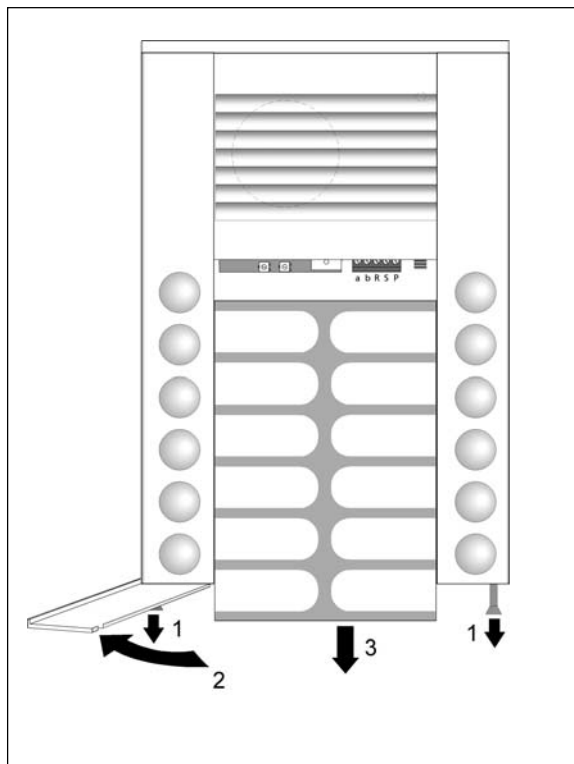
Take care not to pinch the cables under the spacers on the device back.

### 4. Closing the housing

Slide the name plate glass upwards under the front panel.

Turn the lower panel to the right until the recess fits over the screw.

Tighten the screws.



**!** When sliding the name plate glass upwards take care not to damage the rubber seals in the guide grooves.

When fitting additional devices make sure that you can slide the name plate glass of the device downwards out of the profile. Do not fit a device below the device.

**!** Never seal the device using silicon! Condensate must be allowed to drain and evaporate.

## Cable connection

### General notes

Use the small screwdriver supplied to connect the lines and prevent damage to the device.

#### ! Please note

- the lines should not be run in front of the LED to prevent obstruction of the nameplate illumination
- the lines must not be squeezed below the spacers on the back of the front-station.

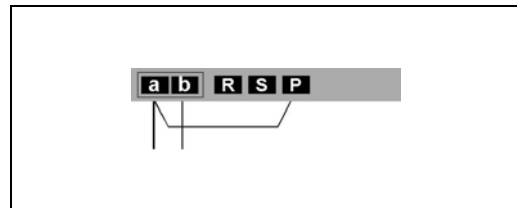
### Connection

1. Strip the insulation from the line ends.
2. Connect the lines, depending on system type, in accordance with the connection diagram.

### 2-wire special mode

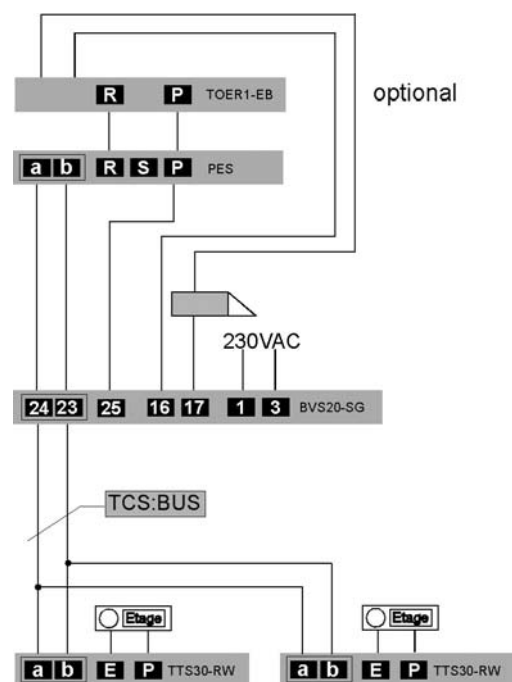
In this mode only one front-door station can be connected! A P-wire has to be made by bridging terminals a and P.

Note: The front-station does not work if the bridge is connected to b instead of a.



### Wiring example

- To connect a door release relay use the R terminal.
- A door release contact can be connected to the S terminal. This allows for checking whether the triggered door is open or closed.



## Commissioning

- Fully install the devices of the system.
- Connect the power supply and control units to the mains voltage.  
Switch on the mains supply.
- Check the voltage between a and b wires for short circuits.

## Microphone and loudspeaker volume setup

**!** For adjustments use the small screwdriver supplied!

The volumes have been set to an average value at factory. A modification may not always be necessary.

When adjusting please note:

The amplification of loudspeaker and microphone cannot be set independently from each other. Too great volume will cause a feedback effect (whistling).

### Volume control

microphone  
In-house station  
volume  
adjustment

loudspeaker  
Front-door station  
volume  
adjustment

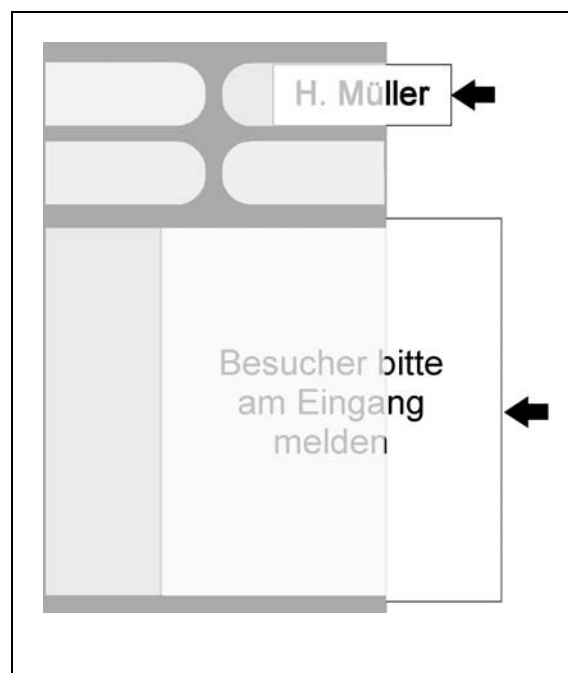


## Nameplate labelling

The templates are available on our website [www.tcs-germany.com](http://www.tcs-germany.com) \ English \ Downloads \ System and technology basics \ Product installation and use \ labelling of the nameplate

1. Enter the desired name into the template.
2. Print the name plate on the special film\* and cut it to size.
3. Loosen the pockets at the outer edge of the name plate glass using the insertion aid supplied.
4. Insert the cut plates from the side into the pockets on the name plate glass.

\* We recommend to print the name plates on a durable special film. The film can be ordered directly from TCS: Writable polyester film for name plates DIN A4.



## Programming of bell buttons

### Basic principle




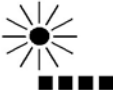

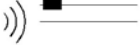

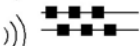


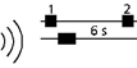

All devices at the TCS:BUS have a unique serial number. During programming this serial number is transferred to the front-door station and linked to the bell button.

### Programming with the Service Device

Utilise the simple 1 person programming with the TCS Service Device. You will not need access to the in-house stations in the flats. The voltage supply is provided by connecting the Service Device to the TCS:BUS. For more on the TCS Service Device see: [www.tcs-germany.de](http://www.tcs-germany.de)

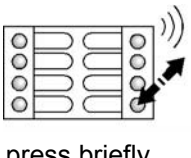



If you do not have the Service Device, you can also program manually.

### Programming steps legend

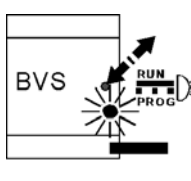
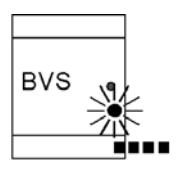
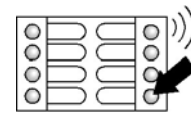
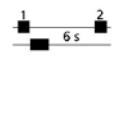
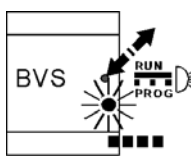
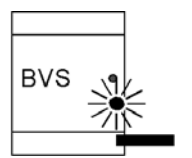
briefly press key		LED flashes slowly	
press key until		LED flashes rapidly	
release key		NoProg tone	
continue		ring tone	
wait until		Prog2 tone	
Delation tone		Progsper tone	

## Programming state of a bell button

The front-door stations are supplied un-programmed.  
The programming state can be checked as follows:

<b>Testing</b>		
 <p style="text-align: center;">press briefly</p>	 <p style="text-align: center;">Noprogram tone</p>	bell button un-programmed
 <p style="text-align: center;">press briefly</p>	 <p style="text-align: center;">ring tone</p>	bell button programmed

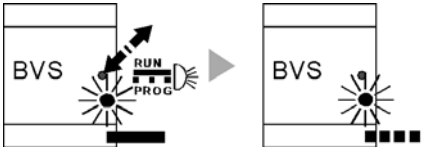

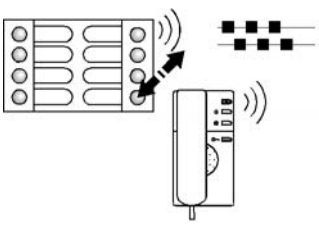
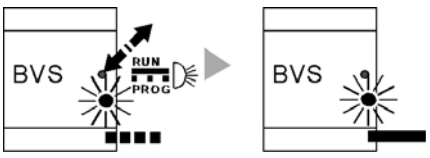
Before a pre-programmed bell button can be re-programmed, the programming must be deleted.

<b>Deleting the programming</b>		
<p><b>1</b></p>  <p style="text-align: center;">Press briefly</p>	 <p style="text-align: center;">LED flashes</p>	programming mode of system switched on
<p><b>2</b></p>  <p style="text-align: center;">Press until</p>	 <p style="text-align: center;">deletion tone sounds<sup>1)</sup>,</p>	bell button deleted
<p><b>3</b></p>  <p style="text-align: center;">Press briefly</p>	 <p style="text-align: center;">LED flashes no more</p>	programming mode of system switched off

1) If Progsper tone sounds the programming block is active. It can be removed by the service device TCSK-01 only.

## Programming a bell button

Connect the in-house station to the TCS:BUS.  
Use one of these two methods.

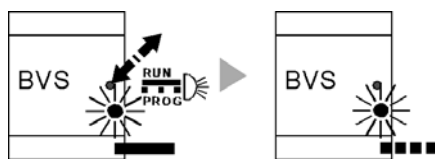
<b><u>Method 1: In-house station not accessible</u></b>		
<b>1</b>	<p>LED illuminates</p>  <p style="text-align: center;">Press briefly      LED flashes</p>	programming mode of <u>system</u> switched on
<p><b>2</b></p>  <p style="text-align: center;">Floor-switch button within 3 sec: press 1 sec, until bell rings - release - press 1 sec until bell rings - release.</p>		
<b>3</b>	 <p style="text-align: center;">Press briefly      ring tone sounds at front-door and in-house station<sup>1)</sup></p>	bell button programmed
<b>4</b>	 <p style="text-align: center;">Press briefly      LED illuminates</p>	programming mode of <u>system</u> switched off

### Programming the other bell buttons:

- Step 1
- repeat steps 2 and 3 each time
- complete the programming of all buttons with step 4

**Method 2: In-house station accessible**

1 LED illuminates

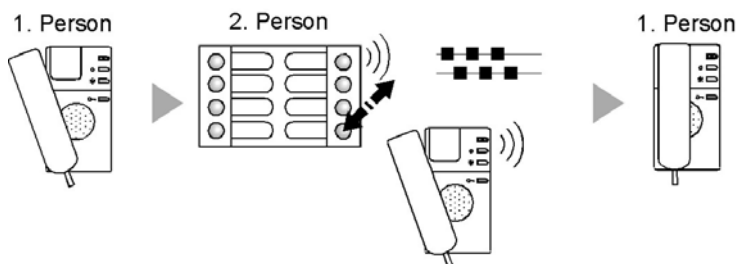


Press briefly

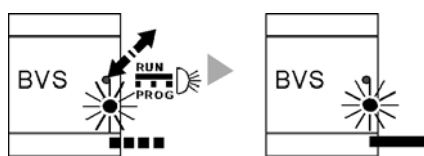
LED flashes

programming  
mode  
of system  
switched on

2

Lift handset  
at in-house stationpress briefly,  
ring tone sounds  
at front-door and in-house station<sup>1)</sup>.replace handset  
at in-house stationbell button  
programmed

3



Press briefly

LED illuminates

programming  
mode  
of system  
switched off**Programming the other bell buttons:**

- Step 1
- repeat step 2 each time for additional bell buttons where necessary
- complete the programming of all buttons with step 3

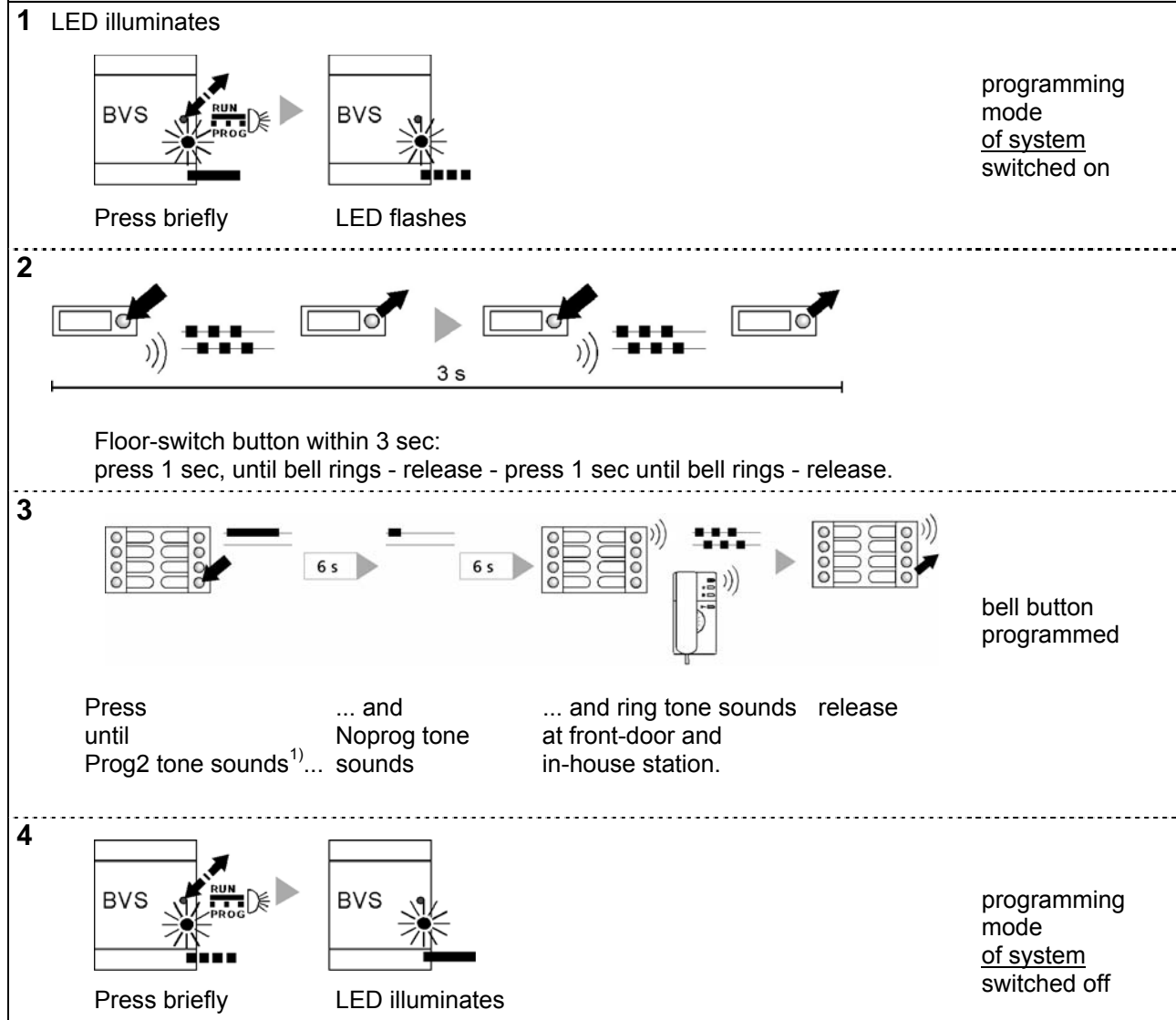
## Programming an already programmed bell button

### Basic principle

A bell button can be linked to two serial numbers (of two in-house stations). It is then possible to have two different in-house stations ring at the same time.

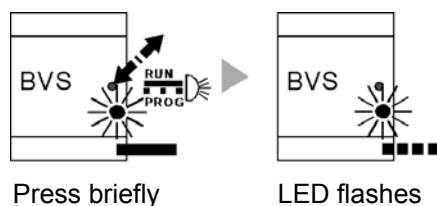
Connect the in-house stations to the TCS:BUS.  
Use one of these two methods.

### Method 1: In-house station not accessible



### Programming the other already programmed bell buttons

- Step 1
- repeat steps 2 and 3 each time
- complete the programming of all buttons with step 4

**Method 2: In-house station accessible****1** LED illuminates

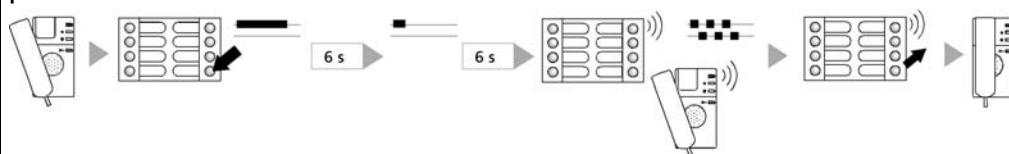
programming  
mode  
of system  
switched on

**2**

1st person  
person

2nd person

1st



bell button  
programmed

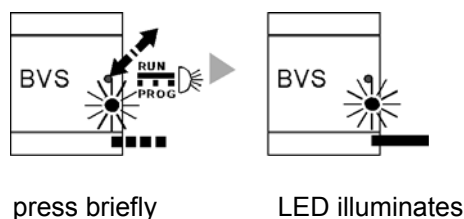
Lift handset  
at the  
in-house  
station.

Press until  
Prog2 tone  
sounds<sup>1)</sup>  
...

...and  
Noprogram  
tone  
sounds

... and ring tone  
sounds at  
front-door and  
in-house station.

release  
replace  
handset  
at in-house  
station.

**3**

programming  
mode  
of system  
switched off

**Programming the other already programmed bell buttons**

- Step 1
- repeat step 2 each time for additional bell buttons where necessary
- complete the programming of all buttons with step 3

**Note**

Repeated programming of an already programmed bell button always only changes the second serial number. If you want to change the first programmed serial number, you have to delete both serial numbers and then re-program both serial numbers.


## Repair

### ***Replacing the EEPROM memory***

All programmed data, like serial numbers and parameters, are stored in the EEPROM. If the front-door station requires replacement, the EEPROM board can be removed from the programmed front-door station and inserted into the new front-door station of identical design.

- Open the case.
- Pull the small PCB off the electronic board.
- Plug the EEPROM board onto the pins in the new un-programmed front-door station. Take care that all four poles of the plug are inserted into the jack of the small PCB and that the component side is visible.
- After replacement all programming is available again.

## Cleaning

 Avoid water entering the device!  
Do not use any aggressive or abrasive cleaning agents!

Clean the device using a dry or slightly moist cloth.  
More persistent dirt can be removed using a mild household cleaner.

## Service

Contact your local sales representative or  
**[www.tcs-germany.com](http://www.tcs-germany.com)**